

ト圖トヲ掲ゲテ居ル。ソレヲ見ルト、*Pl. bifolia* デハナク却ツテ *Pl. chlorantha* 系ニ屬スルモノデアルコトハソノ幅ノ廣イ雄蕊ガ雄辯ニ物語ツテ居ル。幸ナコトニ、東大植物學教室ニ永井勇助氏ガ同山デ採集サレタ標本ガアツテコレモ亦錢氏ノ圖示スルモノト一致スル。サテコレハ歐洲ノ *Pl. chlorantha* デモナク又ハ朝鮮ノかうらいちどりトモ異ナルモノデソノ顯著ナ特徴トシテS狀ニウネリシカモ倒立シタ距ヲ舉ゲルコトガ出來ルノデアルガ、コレハ丁度まひさぎさう(*Pl. neglecta* SCHLECHTER)ノ距ノ有様トソツクリデアル。錢氏モソノ距ノウネルコトニ氣付イテ記シテ居ル、タ、圖デハヤ、水平ニナツテ居ルガコレハ腊葉ノ具合デアラウト思フ。今コノ特徴ヲ以テ新種 ***Platanthera sigmoidea*** F. MAEKAWA トスル。(ツマク)

Observationes ad Plantas Asiæ Orientalis (IV)

auctore

Hiroshi HARA

原 寛：東亞植物考（其四）

Euphorbia L. is a very large and complicated genus : the typical *Euphorbia* has cactus-like spinose jointed stems and small or rudimentary leaves, so under the modern system of classification it is natural to separate the Spurge group under a different generic name. This was actually done as long ago as 1700 by TOURNEFORT who introduced the generic name *Tithymalus* for the group, but LINNAEUS disregarded this division and reunited the group under *Euphorbia*. Subsequent to the publication of LINNAEUS's 'Species Plantarum' (1753), the first botanist who re-adopted the name *Tithymalus* was MILLER, who explains its application, limited however to the plant later known as *Pedilanthus* NECKER, in his 'Gardener's Dictionary, Abridged, ed. 4, vol. III' (1754), from which the following quotation is extracted :—

TITHYMALUS, Spurge.

The several Kinds of Spurge having been ranged under the Title of *Euphorbia* by Dr. *Linnaeus*, as they agree well together in their Flower and Fruit ; and were

separated by former Botanists, for their outward Appearance only; therefore I have followed the Doctor in placing them together: but as there is an essential Difference between the Flowers of the Genus, and those of *Euphorbia*, I have applied the old Name to this Genus rather than that of *Tithymaloides*.

The Characters are;

The Flower consists of one Leaf, and is in Shape somewhat like a Slipper; whose Pointal afterward becomes a tricapsular Fruit, like that of *Euphorbia*.

The Species are;

1. *TITHYMALUS frutescens, folio myrti amplissimo. Tourn.* The American shrubby laurel-leaf'd Spurge, *vulgo*.

2. *TITHYMALUS frutescens, foliis nerii. Plum.* Shrubby Spurge, with an Oleander-leaf.

It is therefore correct to apply the name *Tithymalus* MILLER (1754) in the sense of *Pedilanthus* NECKER (1790), but not to the Spurge group as was done later by HILL (1756), ADANSON (1763), SCOPOLI (1771) and other authors.

In Japan (excluding Formosa, Liukiu, Korea, etc.) the Spurges fall naturally into two groups distinguished as follows:—

A. Glandulæ involucri exappendiculatæ. Folia vulgo alterna exstipulata. Semina carunculata.

B. Glandulæ involucri appendiculatæ. Folia opposita basi obliqua stipulata. Semina ecarunculata.

The oldest generic name for Group A, *Esula* RUPPIUS (1745), is pre-Linnean and remained out of use for many years. HAWORTH resurrected it in his 'Synopsis Plantarum Succulentarum' (1812), but earlier in the same work he established the genus *Galarhœus* which must therefore be taken as the valid name for Group A. *Keraselma* NECKER (1790) should be rejected because the author did not cite a specific name, so that the type of the genus is obscure.

For Group B the earliest name is *Anisophyllum* HAWORTH (1812), but unfortunately the same name had been used for another purpose by JACQUIN in 1763. The valid name, therefore, is *Chamæsyce* S. F. GRAY (1821).

Galarhœus HAWORTH, Synop. Pl. Succul. p. 143 (1812)—STEUDEL, Nom. Bot. ed. 2, I. p. 653 (1840)—SMALL, Manual SE. Fl. p. 800 (1933).

Syn. *Euphorbia* LINNÆUS, Sp. Pl. ed. I, I, p. 450 (1753); Gen. Pl. ed. 5, p. 208 (1754) pro parte.

Tithymalus [TOURNEFORT, Instit. Rei Herb. I, p. 85 (1700) pro parte] (non MILLER 1754) HILL, Brit. Herb. p. 148 (1756) excl. *T. maritimus ramosus*—ADANSON, Fam. Pl. II p. 355 (1763)—SCOPOLI, Fl. Carn. ed. 2, I, p. 332 (1771) excl. *T. Peplis*—NECKER, Elem. Bot. II, p. 354 (1790)—GAERTNER, Fruct. II, p. 115, t. 107. f. 2 (1791)—KLOTZSCH et GARCKE in Monatsbericht Kön. Akad. Wiss. Berlin, März 1859, p. 251 (1859); in Phys. Abhandl. Kön. Akad. Wiss. Berlin, 1859, p. 64 (1860)—SMALL, Fl. SE. U.S. p. 718 (1903)—BRITTON et BROWN, Ill. Fl. N. U. S. & Canad. ed. 2, II, p. 471 (1913)—BRITTON, Fl. Bermuda p. 216 (1918).

Keraselma NECKER, l. c. p. 353 (1790)—RAFINESQUE, Fl. Telluv. IV, p. 116 (1836).

Esula [RUPPIUS, Fl. Jen. ed. 3, p. 271 (1745)] HAWORTH, Synop. Pl. Succul. p. 153 (1812)—STEUDEL, l. c. p. 599 (1840).

Euphorbia sect. *Esula* ROEPER in DUBY, Bot. Gall. I, p. 114 (1828)—LEDEBOUR, Fl. Ross. III, p. 569 (1849–51).

Euphorbia sect. *Tithymalus* REICHENBACH, Fl. Germ. Excurs. III, p. 755 (1832).

Euphorbia sect. *Tithymalus* KOCH, Synop. Fl. Germ. et Helv. p. 627 (1837)—LEDEBOUR, l. c. p. 558 (1849–51).

Euphorbia sect. *Tithymalus* BOISSIEU in DC., Prodr. XV-2, p. 99 (1862)—BENTHAM et HOOKER, Gen. Pl. III-1, p. 260 (1880)—PAX in ENGLER, Pfl.-fam. III-5, p. 109 (1896)—PAX et HOFFMANN in ENGLER, Pfl.-fam. ed. 2, 19 c, p. 216 (1931).

30) (1) **Galarhoeus adenochlorus** (MORR. et DECNE.) HARA, comb. nov.
Syn. *Euphorbia adenochlora* MORREN et DECAISNE in Bull. Acad. Brux. III, p. 174 (1836)—BOISSIEU in DC., Prodr. XV-2, p. 176 (1862)—MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III, p. 126 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 422 (1875)—MAXIMOWICZ in Mel. Biol. XI, p. 835 (1883)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 67, tab. IV. H (1904)—MAKINO in IINUMA, Sômoku-dzusetsu, ed. MAKINO, II, p. 694, pl.

551 (1910)—MATSUMURA, Ind. Pl. Jap. II-2, p. 302 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 648 (1931).

Euphorbia palustris (non L.) A. GRAY, Bot. Jap. p. 405 (1859)—MIQUEL, l. c. (1867)—FRANCHET et SAVATIER, l. c. (1875).

Euphorbia japonica BOISSIEU in DC., l. c. p. 1266 (1866) fide MAXIM.

Euphorbia Rochebruni FRANCHET et SAVATIER, l. c. p. 421 (1875); II, p. 485 (1876).

Nom. Jap. *No-urushi*.

Hab. Yezo, Honshu and Kyushu.

Endemic plant.

31) (2) **Galarhoeus ebracteolatus** (HAYATA) HARA, comb. nov.

Syn. *Euphorbia ebracteolata* HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 71, tab. IV. I (1904)—MAKINO in IINUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 697, pl. 552 (1910)—MATSUMURA, Ind. Pl. Jap. II-2, p. 302 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 649 (1931)

Nom. Jap. *Marumi-nourushi* (HAYATA), *Beni-taigeki* (MAKINO), *Ryojo*.

Hab. Yezo and Honshu.

Endemic plant.

32) (3) **Galarhoeus Esula** (LINNAEUS) HARA, comb. nov.

Syn. *Euphorbia Esula* LINNAEUS, Sp. Pl. ed. 1, I, p. 461 (1753)—MAXIMOWICZ in Mel. Biol. XI, p. 839 (1883)—MAKINO in Bot. Mag. Tokyo XII, p. [339] (1898)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 72 (1904)—MAKINO in IINUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 700, pl. 555 (1910)—NAKAI, Fl. Korea. II, p. 186 (1911)—MATSUMURA, Ind. Pl. Jap. II-2, p. 302 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 649 (1931).

Tithymalus Esula HILL, Hort. Kew. p. 174 (1768).

Tithymalus Esula SCOPOLI, Fl. Carn. ed. 2, I, p. 338 (1771).

Nom. Jap. *Hagikusô*.

Hab. Honshu, Kyushu and Korea.

Dist. Japan, Korea, Manchuria, Amur, Siberia, Asia Minor and Europe.

33) (4) **Galarhoeus helioscopius** HAWORTH, Synop. Pl. Succul. p. 152 (1812).

Syn. *Euphorbia Helioscopia* LINNAEUS, Sp. Pl. ed. 1, I, p. 459 (1753)—THUNBERG, Fl. Jap. p. 197 (1784)—BOISSIEU in DC., Prodr. XV-2, p. 136 (1862)—MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III, p. 126 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 422 (1875)—MAXIMOWICZ in Mel. Biol. XI, p. 838 (1883)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 66, tab. IV. G (1904)—MAKINO in INUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 701, pl. 556 (1910)—NAKAI, Fl. Korea. II, p. 184 (1911)—MATSUMURA, Ind. Pl. Jap. II-2, p. 302 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 650 (1931).

Tithymalus helioscopius HILL [Brit. Herb. p. 150 (1756)] Hort. Kew. p. 172 (1768).

Tithymalus helioscopius SCOPOLI, Fl. Carn. ed. 2, I, p. 337 (1771).

Nom. Jap. *Tôdaigusa*.

Hab. Honshu, Shikoku, Kyushu, Liukiu and Korea.

Dist. Japan, Korea, China, Manchuria, India, Europe and N. Africa. Naturalized in America and Australia.

34) (5) **Galarhoeus Jolkini** (BOISSIEU) HARA, comb. nov.

Syn. *Euphorbia Jolkini* BOISSIEU in DC., Prodr. XV-2, p. 121 (1862) ; Icon, Euphorb. p. 19, t. 71 (1866)—MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III, p. 126 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 421 (1875)—MAXIMOWICZ in Mel. Biol. XI, p. 836 (1883)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 68 (1904)—MAKINO in INUMA Sômoku-dzusetsu ed. MAKINO, II, p. 707, pl. 562 (1910)—NAKAI, Fl. Korea. II, p. 185 (1911)—MATSUMURA, Ind. Pl. Jap. II-2, p. 303 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 650 (1931)—S. SUZUKI in Sylvia IV, p. 155 (1933).

Nom. Jap. *Iwa-taigeki*, *Akame-daigeki*.

Hab. Honshu, Shikoku, Kyushu, Liukiu, Formosa and Korea.

Endemic plant.

35) (6) **Galarhoeus Lathyris** HAWORTH, Synop. Pl. Succul. p. 143 (1812)

Syn. *Euphorbia Lathyris* LINNAEUS, Sp. Pl. ed. 1, I, p. 457 (1753) (sphal-mate *Lathyrus*)—THUNBERG, Fl. Jap. p. 196 (1784)—MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III, p. 125 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 420 (1875)—MAXIMOWICZ in Mel. Biol. XI, p. 833 (1883)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 65, tab. IV. F (1904)—MAKINO in IINUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 708, pl. 563 (1910)—MATSUMURA, Ind. Pl. Jap. II-2, p. 303 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 650 (1931).

Tithymalus Lathyris HILL, Hort. Kew. p. 172 (1768).

Tithymalus Lathyris SCOPOLI, Fl. Carn. ed. 2, I, p. 332 (1771).

Nom. Jap. *Horutosô*.

Hab. Cultivated in Japan.

Dist. Europe. Naturalized in America.

36) (7) **Galarhoeus pekinensis** (RUPRECHT) HARA, comb. nov.

Syn. *Euphorbia coralloides* (non L.) THUNBERG, Fl. Jap. p. 197 (1784) pro parte.

Euphorbia pekinensis RUPRECHT in MAXIMOWICZ, Prim. Fl. Amur. p. 239 (1859) in nota sub *E. lucorum*—BOISSIEU in DC., Prodr. XV-2, p. 121 (1862)—MAXIMOWICZ in Mel. Biol. XI, p. 834 (1883)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 68, tab. IV. J (1904)—MAKINO in IINUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 702 & 705, pl. 557 & 559 (1910)—NAKAI, Fl. Korea. II, p. 184 (1911)—MATSUMURA, Ind. Pl. Jap. II-2, p. 303 (1912).

Euphorbia lasiocaula BOISSIEU in DC., l.c. p. 1266 (1866)—MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III p. 126 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 421 (1875); II, p. 485 (1876).

Euphorbia Onoei FRANCHET et SAVATIER, l.c. I, p. 421 (1875); II, p. 486 (1876).

Euphorbia pekinensis var. *japonensis* MAKINO, Nippon-shokubutsu-dzukan, correction p. 3 (1925) nom. nud.

Euphorbia pekinensis var. *Onoei* MAKINO in Journ. Jap. Bot. III-2, p. 8 (1926)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 651 (1931).

Nom. Jap. *Takatôdai, Ibuki-taigeki*.

Hab. Honshu, Shikoku, Kyushu and Korea.

Dist. Japan, Korea, Manchuria and China.

This species is very polymorphous (cf. Fig. 14), and the degree of its hairiness also varies exceedingly. The margin of its leaves is generally minutely serrated, but rarely almost entire.

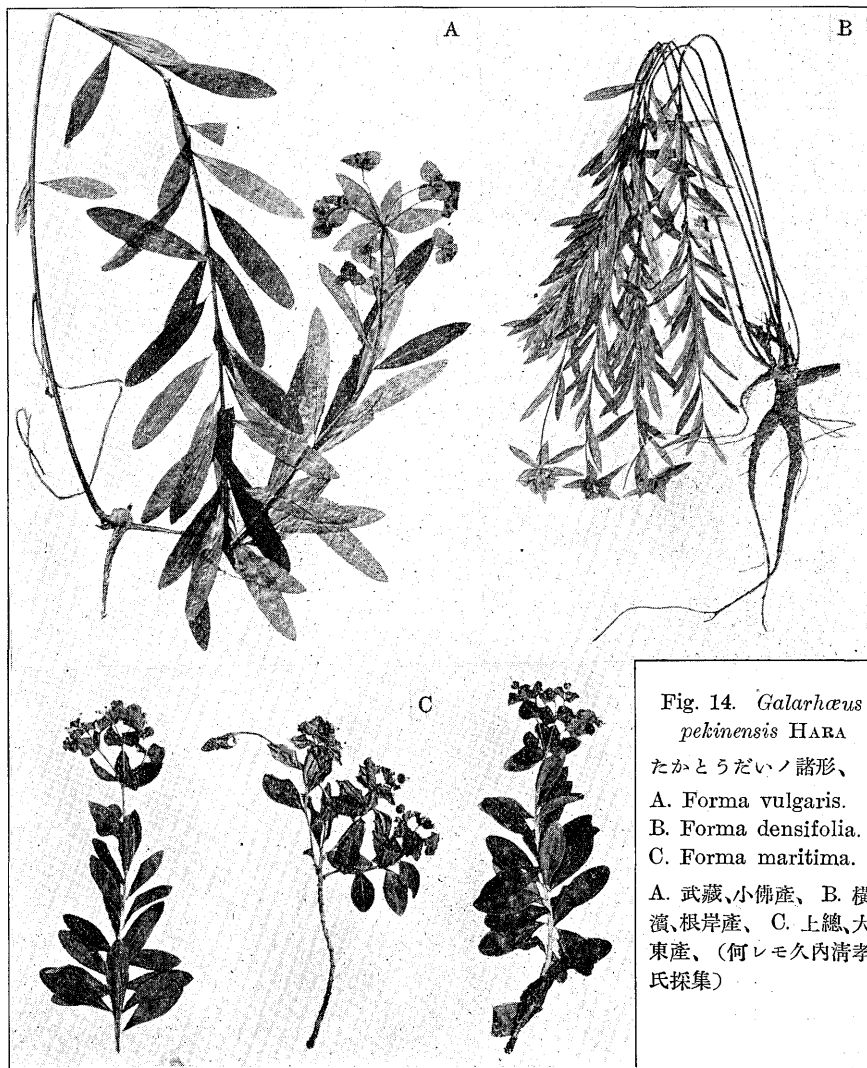


Fig. 14. *Galarhæus pekinensis* HARA

たかとうだいノ諸形、

A. Forma vulgaris.

B. Forma densifolia.

C. Forma maritima.

A. 武蔵、小佛産、B. 横濱、根岸産、C. 上総、大東産、(何レモ久内清孝氏採集)

37) (8) **Galarhoeus sendaicus** (MAKINO) HARA, comb. nov.

Syn. *Euphorbia sendaica* MAKINO in Bot. Mag. Tokyo XXIV, p. 146 (1910); in INUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 706, pl. 561 (1910)—NAKAI in Bot. Mag. Tokyo XXVI, p. [27] (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 652 (1931).

Nom. Jap. *Sendai-taigeki* (INUMA).

Hab. Northern and middle Honshu.

Endemic plant.

38) (9) **Galarhoeus Sieboldianus** (MORR. et DECNE.) HARA, comb. nov.

Syn. *Euphorbia coralloides* (non L.) THUNBERG, Fl. Jap. p. 197 (1784) pro parte, fide Prof. NAKAI.

Euphorbia Sieboldiana MORREN et DECAISNE in Bull. Acad. Brux. III, p. 174 (1836)—BOISSIEU in DC., Prodr. XV-2, p. 158 (1862); Icon. Euphorb. p. 22, t. 104 (1866)—MIQUEL in Ann. Mus. Bot. Lugd.-Bat. III, p. 126 (1867)—FRANCHET et SAVATIER, Enum. Pl. Jap. I, p. 422 (1875) (incl. f. *grandifolia*)—MAXIMOWICZ in Mel. Biol. XI, p. 838 (1883)—HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 71, tab. VI. B (1904)—MAKINO in INUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 698 & 699, pl. 553 & 554 (1910)—NAKAI, Fl. Korea. II, p. 185 (1911)—MATSUMURA, Ind. Pl. Jap. II-2, p. 304 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 652 (1931).

Euphorbia Guilielmi A. GRAY, Bot. Jap. p. 406 (1859).

Euphorbia Tsukamotoi HONDA in Bot. Mag. Tokyo XLVIII, p. 407 (1934)

Nom. Jap. *Natsu-tôdai*.

Hab. Southern Saghalien, Southern Kuriles, Yezo, Honshu, Shikoku, Kyushu and Korea.

The typical form of *Euphorbia Sieboldiana* has long creeping rhizomes and narrow-oblong involucreal-leaves.

var. **montanus** (TATEWAKI) HARA, comb. nov.

Syn. *Euphorbia Sieboldiana* var. *montana* TATEWAKI in Research. Bull. Exper. For. Hokkaido Imp. Univ. VII, p. 193 (1932).

Euphorbia Taquetii LÉVEILLÉ et VANIOT ex LÉVILLÉ in FEDDE, Rep. Sp. Nov V, p. 281 (1908).

Nom. Jap. *Hime-natsutôdai* (TATEWAKI).

Hab. Yezo, Honshu and Korea.

This variety has often caespitose stems and small ovate involueral-leaves.

Dist. Sp. Japan, Korea and Manchuria.

39) (10) **Galarhoeus togakusensis** (HAYATA) HARA, comb. nov.

Syn. *Euphorbia togakusensis* HAYATA in Journ. Coll. Sci. Imp. Univ. Tokyo XX-3, p. 69, tab. VI. A (1904)—MAKINO in IINUMA, Sômoku-dzusetsu ed. MAKINO, II, p. 704, pl. 558 (1910)—MATSUMURA, Ind. Pl. Jap. II-2, p. 305 (1912)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 653 (1931).

Nom. Jap. *Hakusan-taigeki* (IINUMA), *Miyama-nourushi* (HAYATA).

Hab. Honshu.

Endemic plant.

40) (11) **Galarhoeus Watanabei** (MAKINO) HARA, comb. nov.

Syn. *Euphorbia Watanabei* MAKINO in Journ. Jap. Bot. II-4, p. 14 (1920)—MAKINO et NEMOTO, Fl. Jap. ed. 2, p. 653 (1931).

Nom. Jap. *Fuji-taigeki* (MAKINO).

Hab. Middle Honshu.

Endemic plant.

30-44) LINNAEUS ノ *Euphorbia* 屬ハ非常ニ雜多ナ種類ヲ含ンデキテ、現在ノ分類學カラ考ヘルト當然數屬ニ分タレルベキモノデアル。*Euphorbia* 屬ノ基本形ハきりんかくやふくろぎノ如ク、さぼてんノ様ニ關節アル多肉ナ刺ノアル莖ヲ持チ、葉ハ小形又ハ殆ド退化シテキルモノデアツテ、到底たかとうだいにしきさう等ト同一屬トシテ扱フ事ハデキナイ。ソコデ狹義ノ *Euphorbia* 屬ハふくろぎ屬ト呼ブ事ニシタイ。たかとうだいにしきさう類ニ始メテ屬名ヲ與ヘタノハ TOURNEFORT (1700) デ *Tithymalus* ト名付ケタガ、LINNAEUS ハコレヲ採用セズ *Euphorbia* ニ合シタ。1753 年以後 *Tithymalus* ヲ最初ニ復活シタ人ハ MILLER デアル。併シ彼ハ Gardner's Dictionary, Abridged, ed. 4, vol. III (1754) ニ於テソノ意味ヲ通常 *Pedilanthus* 屬トイハレテキル熱帯アメリカノ植物ニ限定シテシマツタ(歐文欄参照)。ソレ故、*Tithymalus* トイフ名ハ、ソノ後 HILL, ADANSON, SCOPOLI 等ノ諸學者ニヨツテたかとうだい類ニ用ヒラレタケレドモ、

ソノ正名トスル事ハデキナイ。

邦産（臺灣・琉球・朝鮮等ヲ除ク）ノモノハ、次ノ様ニ二屬ニ區別スル事ガデキル。

A. 總苞ノ腺體ハ附屬物ヲ有セズ。葉ハ通常互生、托葉ナシ。種子ハ *caruncle* ヲ有ス。……………**たかとうだい屬**

B. 總苞ノ腺體ハ附屬物ヲ有ス。葉ハ對生、基部不整、托葉アリ。種子ハ *caruncle* ヲ有セズ。……………**にしきさう屬**

たかとうだい屬ニハ *Esula* ナル名ガ古クカラアルガ餘リ用ヒラレズ、1753 年後ニ正シコレヲ認メタノハ HAWORTH デアル。併シ彼ハ *Synopsis Plant. Succul.* (1812) デコレヲ認メルト同時ニ *Galarhæus* ナル屬ヲ創設シタ。コノ二屬ノ區別ハ總苞ノ腺體ノ形ニヨルモノデ屬トシテ分ケルベキモノト思ハレナイカラ、先ノ頁ニ出タ *Galarhæus* ヲ採用シテたかとうだい屬ノ正名トスル。我國ニ自生シ又ハ古クカラ栽培サレテキル本屬ノ植物ハ現在 11 種アリ、ソノ學名ハ歐文欄 (No. 30-40) デ見ラレタイ。

にしきさう屬ニハ HAWORTH ガ 1812 年ニ *Anisophyllum* トイフ名ヲツケタガ、残念ナガラ JACQUIN ガ 1763 年ニ同名ヲ他ノ植物ニ用ヒタノデ、次ニ古イ *Chamæsyce* S.F. GRAY (1821) ガ有効名トナル。本屬ニハにしきさう・しまにしきさう・こにしきさう・おほにしきさう等ガハイル。

終リニ特ニ御懇切ナル御指導ヲ賜リ貴重ナル御藏書ノ借覽ヲ許サレタ中井先生ト、重要ナル參考文獻ヲ貸與サレタ前川文夫氏ニ深甚ノ謝意ヲ表シマス。